

HIGHLY CONCENTRATED BROMINE COMPOSITIONS AND METHODS OF PREPARATION

ABSTRACT OF THE DISCLOSURE

5 Liquid and solid bromine-containing compositions are described. A liquid mixed
halogen composition is also described. The highly concentrated liquid compositions and
the high-activity solid compositions have excellent physical and chemical stability. The
compositions are effective biocides in water treatment. Methods of preparing the
compositions are also disclosed. These include combining a bromine compound in the
10 oxidation state of -1 with hydrogen peroxide and a complexing agent followed by the
addition of an alkaline source. The methods may further include the use of a solid
organic or solid inorganic halogenating agent, conducting a solid-liquid separation, and
adding an alkaline source.